WHAT IS CLAIMED IS:

1. An optical-system driving apparatus comprising:

a plurality of positioning means for positioning a spot of a light beam in an information recording position on an optical disk;

sensing means for sensing the reflected light of the light beam projected onto the optical disk;

a plurality of driving signal generating means for generating a plurality of driving signals to drive said plurality of positioning means respectively on the basis of the result of sensing the reflected light sensed by said sensing means;

converting means for converting the plurality of driving signals generated by said plurality of driving signal generating means into a multiple digital signal for channels the number of which is smaller than the number of said positioning means;

decoding means for receiving the multiple digital signal converted by said converting means and decoding it into a plurality of signals; and

driving means for driving said plurality of positioning means independently on the basis of the plurality of signals decoded by said decoding means.

2. The optical-system driving apparatus according to claim 1, wherein said plurality of positioning means include at least two of a tilt actuator, a tracking

actuator, a focus actuator, and an aberration correcting actuator.

3. The optical-system driving apparatus according to claim 1, wherein said plurality of positioning means include a tracking actuator, a focus actuator, a tilt actuator, and an aberration correcting actuator,

said driving signal generating means generates a tracking error signal for driving said tracking actuator, a focus error signal for driving said focus actuator, a tile error signal for driving said tilt actuator, and an aberration correcting signal for driving said aberration correcting actuator, and

said converting means converts said tracking error signal, said focus error signal, said tilt error signal, and said aberration correcting signal into a serial multiple digital signal.

4. The optical-system driving apparatus according to claim 1, wherein said plurality of positioning means include a tracking actuator, a focus actuator, a tilt actuator, and an aberration correcting actuator,

said driving signal generating means generates a tracking error signal for driving said tracking actuator, a focus error signal for driving said focus actuator, a tile error signal for driving said tilt actuator, and an aberration correcting signal for driving said aberration correcting actuator, and

said converting means converts not only said

tracking error signal, said focus error signal, and said tilt error signal but also said tracking error signal, said focus error signal, and said aberration correcting signal into a serial multiple digital signal.

5. A driving circuit applied to an optical disk apparatus which senses the reflected light of a light beam projected onto an optical disk, generates a plurality of driving signals on the basis of the result of the sensing, drives a plurality of positioning means on the basis of the plurality of driving signals, and thereby controls the positioning of a spot of the light beam in an information recording position on the optical disk, said driving circuit comprising:

decoding means for receiving and decoding a multiple digital signal for channels the number of which is smaller than the number of said plurality of positioning means; and

driving means for driving said plurality of positioning means on the basis of a plurality of signals decoded by said decoding means.

6. An optical-system driving method comprising:

sensing the reflected light of a light beam projected onto an optical disk;

generating a plurality of driving signals for driving a plurality of positioning means for positioning a spot of the light beam in an information

recording position on the optical disk on the basis of the result of sensing the reflected light in said sensing step;

converting the plurality of driving signals generated in said generating step into a multiple digital signal for channels the number of which is smaller than the number of said positioning means;

receiving the multiple digital signal converted in said converting step and decoding it into a plurality of signals; and

driving said plurality of positioning means independently on the basis of the plurality of signals decoded in said receiving step.

7. The optical-system driving method according to claim 6, wherein said plurality of positioning means include a tracking actuator, a focus actuator, a tilt actuator, and an aberration correcting actuator,

said generating step generates a tracking error signal for driving said tracking actuator, a focus error signal for driving said focus actuator, a tile error signal for driving said tilt actuator, and an aberration correcting signal for driving said aberration correcting actuator, and

said converting step converts said tracking error signal, said focus error signal, said tilt error signal, and said aberration correcting signal into a serial multiple digital signal.

8. The optical-system driving method according to claim 6, wherein said plurality of positioning means include a tracking actuator, a focus actuator, a tilt actuator, and an aberration correcting actuator,

said generating step generates a tracking error signal for driving said tracking actuator, a focus error signal for driving said focus actuator, a tile error signal for driving said tilt actuator, and an aberration correcting signal for driving said aberration correcting actuator, and

said converting step converts not only said tracking error signal, said focus error signal, and said tilt error signal but also said tracking error signal, said focus error signal, and said aberration correcting signal into a serial multiple digital signal.